

SEQUENCE LISTING

<110> Cedars-Sinai Medical Center

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<120> Mutations in NOD2 are Associated with
Fibrostenosing Disease in Patients with Crohn's Disease

<130> 66783-152

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<150> US 60/407,391

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<150> US 10/356,736

<151> 2003-01-30

<160> 67

<170> FastSEQ for Windows Version 4.0

<210> 1

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<212> DNA

<213> Homo sapiens

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cattttgcag tgtgggcccc actgagtgtg ctgccctggc ctttgtgctg cagcacctcc 360
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<212> DNA

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<210> 4
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<212> DNA
<213> Homo sapiens

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cactctggga ttgagtggc ctgcccctct ggctgggact gcagagggag gaggactgtt 180
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<210> 5
<211> 541
<212> DNA
<213> Homo sapiens

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aatcagatcc ttcacatgca gaatcattct cactgaatgt cagaatcaga agggatcctc 120
aaaattctgc cattcctctc tcccgtcacc ccattttaca gatagaaaaa ctgagggttcg 180
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gagagctaaa acaggcctgc ccaggggcct taccagactt ccaggatggt gtcattcctt 240
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ctgctcatgt ctgagattcc caatgagctc atcaacaaag gtcagtagc atcagtgaag 480
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<210> 6

<211> 541

<212> DNA

<213> Homo sapiens

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<210> 7

<211> 540

<212> DNA

<213> Homo sapiens

<400> 7

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gcaagtgcag ccgctgcagg agcgtgctct tgccactgcc cgccctaccc accaccagca 180
cagtgctccg atcgtcattg aggtggccag gggtagctga gagctcctcc aggcccaggg 240
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gagactgagc agacaccgtg gtccctcagc tggccatata cttcttgcat gtggcagctg 420
gaaggcagaa gaagaggcag atgaagggtg caccatgggt aagacgggac ctaaccagac 480
aatgggctgc tgcggggggac gctgacataa ctgaagggat aggagagcca gcgggcgccc 540

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<210> 8

<211> 540

<212> DNA

<213> Homo sapiens

<400> 8

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cagctgccac atgcaagaag tatatggcca agctgaggac cacgggtgtc gctcagctctc 180
gttctctcag tacctatgat ggagcagaga cgctctgcct ggaggacata tacacagaga 240
atgtcctgga ggtctgggca gatgtgggca tggctggacc cccgcagaag agcccagcca 300

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tgctgggtggt ggggtgaggcg ggcagtggca agagcacgct cctgcagcgg ctgcacttgc 420
tgtgggctgc agggcaagac ttccaggaat ttctctttgt cttcccatc agctgccggc 480
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<210> 9
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 <213> Homo sapiens

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<210> 10
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 <212> DNA
 <213> Homo sapiens

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<210> 11
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 <212> DNA
 <213> Homo sapiens

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ggccaagagc aaatgctttg cttaagtgtc gaaatctcag cccactgacc ccttgagac 480
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<210> 12
<211> 496
<212> DNA
<213> Homo sapiens

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tattacctgg tcgggcttcc cctcttcagg cgaaatctgt cagtctatct gcattgcctt 180
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gccctccctg aaaccaggc ccaggcctga gcctggacac ctcccttcctt cctgagacca 360
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gtgtcctgag tctctg 496

<210> 13
<211> 488
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 434
<223> n = A,T,C or G

<400> 13
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<210> 14
<211> 491
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 437
<223> n = A,T,C or G

<400> 14
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cctggtcggg cttccctctc tcaggcgaaa tctgtcagtc tatctgcatt gccttttgat 180
ctctacttca gttactacaa cttcaaagac accattgtcc tccccaaggt gagggccatg 240

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agcccggttt ctctggggcc aagagcaaat gctttgctta agtgctgaaa tctcagccca 420
ctgaccctt gcagacngga gaggagggga agcccaggga agctcaactt cccaagtgtc 480
ctgagtctct g 491
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<210> 15
<211> 491
<212> DNA
<213> Homo sapiens

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cctggtcggg cttccctctc tcaggcgaaa tctgtcagtc tatctgcatt gccttttgat 180
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ctgagtctct g 491
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<210> 16
<211> 491
<212> DNA
<213> Homo sapiens

<220>
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<222> 437
<223> n = A,T,C or G

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<210> 17
<211> 491
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 159
<223> n = A,T,C or G

<400> 17

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ctgagtctct g 491
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<210> 18

<211> 487

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> 433

<223> n = A,T,C or G

<400> 18

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cggtttctct ggggcccaaga gcaaatgctt tgcttaagtg ctgaaatctc agcccactga 420
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gtctctg 487
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<210> 19

<211> 486

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> 432

<223> n = A,T,C or G

<400> 19

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ggtttctctg gggccaagag caaatgcttt gcttaagtgc tgaaatctca gccactgac 420
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tctctg 486
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<210> 20
<211> 484
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 430
<223> n = A,T,C or G

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tcagttacta caacttcaaa gacaccattg tcctcccaa ggtgaggccc atgtagagaa 240
aggatcactt ccttgctgaa agagaggggc aaggggagac ccacgtgggc cctccctgaa 300
accaggccc aggcctgagc ctggacacct ccttccttcc tgagaccaca gccagcccg 360
tttctctggg gccaaagagca aatgctttgc ttaagtgtg aaatctcagc ccactgacct 420
cttgacagcn ggagaggagg ggaagcccag ggaagctcaa cttcccaagt gtctgagtc 480
tctg 484

<210> 21
<211> 485
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 431
<223> n = A,T,C or G

<400> 21
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yattatctgt ttctaaaatt tgctcttaac atccttcctc ttactccttt attacctggg 120
eggcttccc ctcttcaggc gaaatctgtc agtctatctg cattgccttt tgatctctac 180
ttcagttact acaacttcaa agacaccatt gtcctcccaa aggtgaggcc catgtagaga 240
aaggatcact tccttgctga aagagagggt caaggggaga ccacgtggg cctccctga 300
aaccaggccc caggcctgag cctggacacc tccttccttc ctgagaccac agccagcccg 360
gtttctctgg ggccaagagc aaatgctttg cttaagtgtc gaaatctcag ccactgacc 420
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ctctg 485

<210> 22
<211> 488
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 434
<223> n = A,T,C or G

<400> 22


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ggtcgggctt cccctcttca ggcgaaatct gtcagtctat ctgcattgcc ttttgatctc 180
tacttcagtt actacaactt caaagacacc attgtcctcc ccaaggtgag gcccatgtag 240
agaaaggatc acttccttgc tgaaagagag ggtcaagggg cgaccacgt gggccctccc 300
tgaaaccag gccaggcct gagcctggac acctccttcc ttcttgagac cacagccagc 360
ccggtttctc tggggccaag agcaaagtct ttgcttaagt gctgaaatct cagccactg 420
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<210> 23

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<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> 434

<223> n = A,T,C or G

<400> 23

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tacttcagtt actacaactt caaagacacc attgtcctcc ccaaggtgag gcccatgtag 240
agaaaggatc acttccttgc tgaaagagag ggtcaagggg cgaccacgt gggccctccc 300
tgaaaccag gccaggcct gagcctggac acctccttcc ttcttgagac cacagccagc 360
ccggtttctc tggggccaag agcaaagtct ttgcttaagt gctgaaatct cagccactg 420
acccttgca gacnggagag gaggggaagc ccagggaagc tcaacttccc aagtgtcctg 480
agtctctg 488
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<210> 24

<211> 497

<212> DNA

<213> Homo sapiens

<400> 24

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tcactagget tctggttgat gctgtgaac tgaactctga caacagactt ctgaaataga 60
cccacaagag gcagttccat ttcatttgtg ccagaatgct ttaggatgta cagttatgga 120
ttgaaagttt acaggaaaaa aaattaggcc gttccttcaa agcaaagtgc ttcttgatt 180
attcaaaatg atgtatgttg aagcctttgt aaattgtcag atgctgtgca aatgttatta 240
ttttaaacat tatgatgtgt gaaaactggg taatatttat aggtcacttt gttttactgt 300
cttaagttta tactcttata gacaacatgg cegtgaactt tatgctgtaa ataatcagag 360
gggaataaac tgttgagtca aaacagccat cttccttgtg accaaacatt taaaaatatt 420
ctggctgggc acagtggctc acgcctgtaa tcccagcact ttgggaggcc gaggtgggca 480
gatcacctga ggttggg 497
```

<210> 25

<211> 460

<212> DNA

<213> Homo sapiens

<400> 25

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tgacaacaga cttctgaaat agaccacaaa gaggcagttc catttcattt gtgccagaat 60
gcttttaggat gtacagttat ggattgaaag ttacaggaa aaaaaattag gccgttcctt 120
caaagcaaat gtcttcctgg attattcaaa atgatgtatg ttgaagcctt tgtaaatgtg 180
cagatgctgt gcaaagtgtt ttattttaaa cattatgatg tgtgaaaact ggtaaatatt 240
tataggtcac tttgttttac tgtcttaagt ttatactctt atagacaaca tggccgtgaa 300
ctttatgctg taaataatca gaggggaata aactgttgag tcaaaacagc catcttcctt 360
gtgaccaaac atttaaaaat attctggctg ggcacagtgg ctacgcctg taatcccagc 420
actttgggag gccgaggtgg gcagatcacc tgaggttggg 460
```

<210> 26

<211> 462

<212> DNA

<213> Homo sapiens

<400> 26

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tctgacaaca gacttctgaa atagaccac aagaggcagt tccatttcat ttgtgccaga 60
atgctttagg atgtacagtt atggattgaa agtttacagg aaaaaaatt aggccgttcc 120
ttcaaagcaa atgtcttcct ggattattca aaatgatgta tgttgaagcc tttgtaaatt 180
gtcagatgct gtgcaaagt tattatttta aacattatga tgtgtgaaaa ctgggttaata 240
tttataggtc actttgtttt actgtcttaa gtttatactc ttatagacaa catggccgtg 300
aactttatgc tgtaataaat cagaggggaa taaactgttg agtcaaaaca gccatcttcc 360
ttgtgaccaa acatttaaaa atattctggc tgggcacagt ggctcacgcc tgtaatccca 420
gcactttggg aggccgaggt gggcagatca cctgaggttg gg 462
```

<210> 27

<211> 459

<212> DNA

<213> Homo sapiens

<400> 27

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gacaacagac ttctgaaata gaccacaaag aggcagttcc atttcatttg tgccagaatg 60
ctttaggatg tacagttatg gattgaaagt ttacaggaaa aaaaattagg ccgttccttc 120
aaagcaaatg tcttcctgga ttattcaaaa tgatgtatgt tgaagccttt gtaaattgtc 180
agatgctgtg caaatgttat tattttaaac attatgatgt gtgaaaactg gttaatattt 240
ataggtcact ttgttttact gtcttaagtt tatactctta tagacaacat ggccgtgaac 300
tttatgctgt aaataatcag aggggaataa actgttgagt caaaacagcc atcttccttg 360
tgaccaaaaca tttaaaataa ttctggctgg gcacagtggc tcacgcctgt aatcccagca 420
ctttgggagg ccgaggtggg cagatcacct gaggttggg 459
```

<210> 28

<211> 467

<212> DNA

<213> Homo sapiens

<400> 28

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tgaactctga caacagactt ctgaaataga cccacaagag gcagttccat ttcatttgtg 60
ccagaatgct ttaggatgta cagttatgga ttgaaagttt acaggaaaaa aaattaggcc 120
gttccttcaa agcaaatgtc ttctggatt attcaaaatg atgtatgttg aagcctttgt 180
aaattgtcag atgctgtgca aatgttatta ttttaaacat tatgatgtgt gaaaactggg 240
taatatttat aggtcacttt gttttactgt cttaagttta tactcttata gacaacatgg 300
ccgtgaactt tatgctgtaa ataatcagag ggggaataaac tgttgagtca aaacagccat 360
cttccttgtg accaaacatt taaaaatatt ctggctgggc acagtggctc acgcctgtaa 420
tcccagcact ttgggaggcc gaggtgggca gatcacctga gggttggg 467
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<210> 29
<211> 467
<212> DNA
<213> Homo sapiens

<400> 29
tgaactctga caacagactt ctgaaataga cccacaagag gcagttccat ttcattttgtg 60
ccagaatgct ttaggatgta cagttatgga ttgaaagttt acaggaaaaa aaattaggcc 120
gttccttcaa agcaaatgtc ttcttgatt attcaaaatg atgtatgttg aagcctttgt 180
aaattgtcag atgctgtgca aatgttatta ttttaaacat tatgatgtgt gaaaactggg 240
taatatttat agrtcacttt gttttactgt cttaagttaa tactcttata gacaacatgg 300
ccgtgaactt tatgctgtaa ataatcagag ggggaataaac tgttgagtca aaacagccat 360
cttccttgtg accaaacatt taaaaatatt ctggctgggc acagtggctc acgcctgtaa 420
tcccagcact ttgggaggcc gaggtgggca gatcacctga gggtggg 467

<210> 30
<211> 466
<212> DNA
<213> Homo sapiens

<400> 30
gaactatgac aacagacttc tgaaatagac ccacaagagg cagttccatt tcattttgtgc 60
cagaatgctt taggatgtac agttatggat tgaaagttaa caggaaaaaa aattaggccg 120
ttccttcaaa gcaaatgtct tcctggatta ttcaaaatga tgtatgttga agcctttgta 180
aattgtcaga tgctgtgcaa atgttattat tttaaacatt atgatgtgtg aaaactgggt 240
aatattttata grtcactttg ttttactgtc ttaagtttat actcttatag acaacatggc 300
cgtgaacttt atgctgtaaa taatcagagg ggaataaaact gttgagtcaa aacagccatc 360
ttccttgtga ccaaacattt aaaaatattc tggctgggca cagtggctca cgctgtaat 420
cccagcactt tgggaggccg aggtgggcag atcacctgag gttggg 466

<210> 31
<211> 466
<212> DNA
<213> Homo sapiens

<400> 31
gaactctgac aacagacttc tgaaatagac ccacaagagg cagttccatt tcattttgtgc 60
cagaatgctt taggatgtac agttatggat tgaaagttaa caggaaaaaa aattaggccg 120
ttccttcaaa gcaaatgtct tcctggatta ttcaaaatga tgtatgttga agcctttgta 180
aattgtcaga tgctgtgcaa atgttattat tttaaacatt atgatgtgtg aaaactgggt 240
aatattttata grtcactttg ttttactgtc ttaagtttat actcttatag acaacatggc 300
cgtgaacttt atgctgtaaa taatcagagg ggaataaaact gttgagtcaa aacagccatc 360
ttccttgtga ccaaacattt aaaaatattc tggctgggca cagtggctca cgctgtaat 420
cccagcactt tgggaggccg aggtgggcag atcacctgag gttggg 466

<210> 32
<211> 460
<212> DNA
<213> Homo sapiens

<400> 32
tgacaacaga cttctgaaat agaccacaa gaggcagttc catttcattt gtgccagaat 60

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gcttttaggat gtacagttat ggattgaaag tttacaggaa aaaaaattag gccgttcctt 120
caaagcaaat gtcttcctgg attattcaaa atgatgtatg ttgaagcctt tgtaaatgtg 180
cagatgctgt gcaaagtgtt ttattttaaa cattatgatg tgtgaaaact ggттаатatt 240
tatagrtcac tttgtttttac tgtcttaagt ttatactctt atagacaaca tggccgtgaa 300
ctttatgctg taaataatca gaggggaata aactgttgag tcaaaacagc catcttcctt 360
gtgaccaaac atttaaaaat attctggctg ggcacagtgg ctcacgcctg таатcccagc 420
actttgggag gccgaggtgg gcagatcacc tgaggttggg 460
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<210> 33

<211> 467

<212> DNA

<213> Homo sapiens

<400> 33

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tgaactctga caacagactt ctgaaataga cccacaagag gcagttccat ttcattttgtg 60
ccagaatgct ttaggatgta cagttatgga ttgaaagttt acaggaaaaa aaattaggcc 120
gttccttcaa agcaaatgtc ttcttgatt attcaaaatg atgtatgttg aagcctttgt 180
aaattgtcag atgctgtgca aatgttatta ttttaaacad tatgatgtgt gaaaactggg 240
taatatattat aggtcacttt gttttactgt cttaagttta tactcttata gacaacatgg 300
ccgtgaactt tatgctgtaa атаатсagag ggggaataaac tgttgagtca aaacagccat 360
cttccttgtg accaaacatt taaaaatatt ctggctgggc acagtggctc acgcctgtaa 420
tcccagcact ttgggaggcc gaggtgggca gatcacctga gggttggg 467
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<210> 34

<211> 460

<212> DNA

<213> Homo sapiens

<400> 34

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tgacaacaga cttctgaaat agaccacaa gaggcagttc catttcattt gtgccagaat 60
gcttttaggat gtacagttat ggattgaaag tttacaggaa aaaaaattag gccgttcctt 120
caaagcaaat gtcttcctgg attattcaaa atgatgtatg ttgaagcctt tgtaaatgtg 180
cagatgctgt gcaaagtgtt ttattttaaa cattatgatg tgtgaaaact ggттаатatt 240
tatagatcac tttgtttttac tgtcttaagt ttatactctt atagacaaca tggccgtgaa 300
ctttatgctg taaataatca gaggggaata aactgttgag tcaaaacagc catcttcctt 360
gtgaccaaac atttaaaaat attctggctg ggcacagtgg ctcacgcctg таатcccagc 420
actttgggag gccgaggtgg gcagatcacc tgaggttggg 460
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<210> 35

<211> 462

<212> DNA

<213> Homo sapiens

<400> 35

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tctgacaaca gacttctgaa atagaccac aagaggcagt tccatttcat ttgtgccaga 60
atgctttagg atgtacagtt atggattgaa agtttacagg aaaaaaaatt aggccgttcc 120
ttcaaagcaa atgtcttcct ggattattca aaatgatgta tgttgaaaggc tttgtaaatt 180
gtcagatgct gtgcaaatgt tattatttta aacattatga tgtgtgaaaa ctggttaata 240
tttatagatc actttgtttt actgtcttaa gtttatactc ttatagacaa catggccgtg 300
aactttatgc tgtaataaat cagaggggaa taaactgttg agtcaaaaaca gccatcttcc 360
ttgtgaccaa acattttaaaa atattctggc tgggcacagt ggctcacgcc tgtaatccca 420
gcactttggg aggccgaggt gggcagatca cctgaggttg gg 462
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<210> 36
 <211> 463
 <212> DNA
 <213> Homo sapiens

<400> 36
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 aatgcttttag gatgtacagt tatggattga aagttttacag gaaaaaaaaat tagggccgttc 120
 cttcaaagca aatgtcttcc tggattattc aaaatgatgt atgttgaagc ctttgtaaata 180
 tgtcagatgc tgtgcaaatag ttattatttt aaacattatg atgtgtgaaa actgggttaata 240
 atttatagrt cactttgttt tactgtctta agttttatact cttatagaca acatggccgt 300
 gaactttatg ctgtaaataa tcagagggga ataaactgtt gagtcaaaac agccatcttc 360
 cttgtgacca aacattttaa aatattctgg ctgggcacag tggctcacgc ctgtaatccc 420
 agcactttgg gaggccgagg tgggcagatc acctgaggtt ggg 463

<210> 37
 <211> 17
 <212> DNA
 <213> Homo sapiens

<400> 37
 ggtggctggg ctcttct 17

<210> 38
 <211> 24
 <212> DNA
 <213> Homo sapiens

<400> 38
 ctgcttctct cagtacctat gatg 24

<210> 39
 <211> 21
 <212> DNA
 <213> Homo sapiens

<400> 39
 ctggctgagt gccagacatc t 21

<210> 40
 <211> 17
 <212> DNA
 <213> Homo sapiens

<400> 40
 ggcgggatgg agtggaa 17

<210> 41
 <211> 21
 <212> DNA
 <213> Homo sapiens

<400> 41

ccacctcaag ctctggatg c

21

<210> 42

<211> 23

<212> DNA

<213> Homo sapiens

<400> 42

gttgactctt ttggcctttt cag

23

<210> 43

<211> 23

<212> DNA

<213> Homo sapiens

<400> 43

ccttaccaga cttccaggat ggt

23

<210> 44

<211> 25

<212> DNA

<213> Homo sapiens

<400> 44

tgtccaataa ctgcatcacc tacct

25

<210> 45

<211> 13

<212> DNA

<213> Homo sapiens

<400> 45

catggctgga ccc

13

<210> 46

<211> 13

<212> DNA

<213> Homo sapiens

<400> 46

catggctgga tcc

13

<210> 47

<211> 13

<212> DNA

<213> Homo sapiens

<400> 47

tgctccggcg cca

13

<210> 48

<211> 14

<212> DNA

<213> Homo sapiens

<400> 48

ctgctctggc gccca

14

<210> 49

<211> 16

<212> DNA

<213> Homo sapiens

<400> 49

ctctgttgcc ccagaa

16

<210> 50

<211> 15

<212> DNA

<213> Homo sapiens

<400> 50

ctctgttgcg ccaga

15

<210> 51

<211> 15

<212> DNA

<213> Homo sapiens

<400> 51

ctttcaaggg cctgc

15

<210> 52

<211> 15

<212> DNA

<213> Homo sapiens

<400> 52

cctttcaagg ggcct

15

<210> 53

<211> 16

<212> DNA

<213> Homo sapiens

<400> 53

aagactcgag tgcct

16

<210> 54

<211> 16

<212> DNA

<213> Homo sapiens

<400> 54

agactcaagt gtcctc

16

<210> 55
<211> 533
<212> DNA
<213> Homo sapiens

<400> 55
ttcgtctcag tttgtttgtg agcaggctgt gagtttgggc cccagaggct ggggtgacatg 60
tggttggcagc ctcttcaaaa tgagccctgt cctgcctaag gctgaacttg ttttctggga 120
acaccatagg tcacctttat tctggcagag gagggagcat cagtgccttc caggatagac 180
ttttcccaag cctacttttg ccattgactt cttcccaaga ttcaatccca ggatgtacaa 240
ggacagcccc tcctccatag tatgggactg gcctctgctg atcctcccag gcttccgtgt 300
gggtcagtgg ggcccatgga tgtgcttgtt aactgagtgc cttttggtgg agaggccccg 360
cctctcacia aagaccctt accactgctc tgatgaagag gactacacag aacacataat 420
tcaggaagca gctttcccca tgtctcgact catccatcca ggccattccc cgtctctggt 480
tcctcccctc ctctggact cctgcacacg ctcttctc tgaggctgaa att 533

<210> 56
<211> 497
<212> DNA
<213> Homo sapiens

<400> 56
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taaggctgaa cttgttttct gggaacacca taggtcacct ttattctggc agaggagggga 120
gcatcagtgc cctccaggat agacttttcc caagcctact tttgccattg acttcttccc 180
aagattcaat cccaggatgt acaaggacag cccctcctcc atagtatggg actggcctct 240
gctgatectc ccaggcttcc gtgtgggtca gtggggccca tggatgtgct tgttaactga 300
gtgccttttg gtggagaggg ccggcctctc acaaaagacc ccttaccact gctctgatga 360
agaggagtac acagaacaca taattcagga agcagctttc cccatgtctc gactcatcca 420
tccaggccat tccccgtctc tggttcctcc cctcctcctg gactcctgca cacgctcctt 480
cctctgagggc tgaaatt 497

<210> 57
<211> 497
<212> DNA
<213> Homo sapiens

<400> 57
gggccccaga ggctgggtga catgtgttgg aagcctcttc aaaatgagcc ctgtcctgcc 60
taaggctgaa cttgttttct gggaacacca taggtcacct ttattctggc agaggagggga 120
gcatcagtgc cctccaggat agacttttcc caagcctact tttgccattg acttcttccc 180
aagattcaat cccaggatgt acaaggacag cccctcctcc atagtatggg actggcctct 240
gctgatectc ccaggcttcc gtgtgggtca gtggggccca tggatgtgct tgttaactga 300
gtgccttttg gtggagaggg ccggcctctc acaaaagacc ccttaccact gctctgatga 360
agaggagtac acagaacaca taattcagga agcagctttc cccatgtctc gactcatcca 420
tccaggccat tccccgtctc tggttcctcc cctcctcctg gactcctgca cacgctcctt 480
cctctgagggc tgaaatt 497

<210> 58
<211> 497
<212> DNA
<213> Homo sapiens

<400> 58

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gggccccaga ggctgggtga catgtgttgg cagcctcttc aaaatgagcc ctgtcctgcc 60
taaggctgaa cttgttttct gggaacacca taggtcacct ttattctggc agaggaggga 120
gcatcagtgc cctccaggat agacttttcc caagcctact tttgccattg acttcttccc 180
aagattcaat ccaggatgt acaaggacag cccctcctcc atagtatggg actggcctct 240
gctgatcctc ccaggcttcc gtgtgggtca gtggggccca tggatgtgct tgttaactga 300
gtgccttttg gtggagaggg ccggcctctc aaaaaagacc ccttaccact gctctgatga 360
agaggagtac acagaacaca taattcagga agcagctttc cccatgtctc gactcatcca 420
tccaggccat tccccgtctc tggttcctcc cctcctcctg gactcctgca cacgctcctt 480
cctctgaggg tgaaatt 497
```

<210> 59

<211> 483

<212> DNA

<213> Homo sapiens

<400> 59

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gggtgacatg tgttggcagc ctcttcaaaa tgagccctgt cctgcctaag gctgaacttg 60
ttttctggga acaccatagg tcacctttat tctggcagag gaggagcat cagtgccttc 120
caggatagac ttttcccaag cctacttttg ccattgactt cttcccaaga ttcaatccca 180
ggatgtacaa ggacagcccc tcctccatag tatgggactg gcctctgctg atcctcccag 240
gcttccgtgt gggtcagtgg ggcccatgga tgtgcttggt aactgagtgc cttttggtgg 300
agaggcccg cctctcacia aagaccctt accactgctc tgatgaagag gagtacacag 360
aacacmtaat tcaggaagca gctttcccca tgtctcgact catccatcca ggccattccc 420
cgtctctggt tcctccctc ctctggact cctgcacacg ctcttctc tgaggctgaa 480
att 483
```

<210> 60

<211> 500

<212> DNA

<213> Homo sapiens

<400> 60

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tttgggcccc agaggctggg tgacatgtgt tggcagcctc ttcaaatga gccctgtcct 60
gcctaaggct gaacttgttt tctgggaaca ccataggtca cttttattct ggcagaggag 120
ggagcatcag tgccctccag gatagacttt tcccaagcct acttttgcca ttgacttctt 180
cccaagattc aatcccagga tgtacaagga cagccctcct tccatagtat gggactggcc 240
tctgctgata ctcccaggct tccgtgtggg tcagtggggc ccatggatgt gcttggttaac 300
tgagtgcctt ttggtggaga ggcccgccct ctcaaaaag accccttmcc actgctctga 360
tgaagaggag tacacagaac acataattca ggaagcagct ttccccatgt ctgactcat 420
ccatccaggc cattccccgt ctctggttcc tccccctc ctggactcct gcacacgctc 480
cttctctga ggctgaaatt 500
```

<210> 61

<211> 499

<212> DNA

<213> Homo sapiens

<400> 61

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ttgggccccca gaggtgggt gacatgtgtt ggcagcctct tcaaaatgag cctgtcctg 60
cctaaggctg aacttgttt ctgggaacac cataggtcac cttttattct gcagaggagg 120
gagcatcagt gccctccagg atagactttt cccaagccta cttttgcat tgacttctt 180
ccaagattca atcccaggat gtacaaggac agccctcct ccatagtatg ggactggcct 240
```

```
ctgctgatcc tcccaggctt cegtgtgggt cagtggggcc catggatgtg cttgttaact 300
gagtgccttt tgggtggagag gcccggcctc tcacaaaaga ccccttmcca ctgctctgat 360
gaagaggagt acacagaaca cataattcag gaagcagctt tccccatgtc tcgactcatc 420
catccaggcc attccccgtc tctggttctc cccctcctcc tggactcctg cacacgctcc 480
ttcctctgag gctgaaatt                                     499
```

<210> 62

<211> 498

<212> DNA

<213> Homo sapiens

<400> 62

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tgggccccag aggctgggtg acatgtgttg gcagcctctt caaaatgagc cctgtcctgc 60
ctaaggctga acttgttttc tgggaacacc ataggtcacc tttattctgg cagaggaggg 120
agcatcagtg cctccagga tagacttttc ccaagcctac ttttgccatt gacttcttcc 180
caagattcaa tcccaggatg tacaaggaca gcccctctc catagtatgg gactgggctc 240
tgctgatect cccaggcttc cgtgtgggtc agtggggccc atggatgtgc ttgttaactg 300
agtgcctttt ggtggagagg cccggcctct cacaaaagac cccctmccac tgctctgatg 360
aagaggagta cacagaacac ataattcagg aagcagcttt ccccatgtct cgactcatcc 420
atccaggcca ttccccgtct ctggttcctc cctcctcct ggactcctgc acacgctcct 480
tcctctgagg ctgaaatt                                     498
```

<210> 63

<211> 498

<212> DNA

<213> Homo sapiens

<400> 63

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ctaaggctga acttgttttc tgggaacacc ataggtcacc tttattctgg cagaggaggg 120
agcatcagtg cctccagga tagacttttc ccaagcctac ttttgccatt gacttcttcc 180
caagattcaa tcccaggatg tacaaggaca gcccctctc catagtatgg gactggcctc 240
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agtgcctttt ggtggagagg cccggcctct cacaaaagac cccctmccac tgctctgatg 360
aagaggagta cacagaacac ataattcagg aagcagcttt ccccatgtct cgactcatcc 420
atccaggcca ttccccgtct ctggttcctc cctcctcct ggactcctgc acacgctcct 480
tcctctgagg ctgaaatt                                     498
```

<210> 64

<211> 498

<212> DNA

<213> Homo sapiens

<400> 64

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tgggccccag aggctgggtg acatgtgttg gcagcctctt caaaatgagc cctgtcctgc 60
ctaaggctga acttgttttc tgggaacacc ataggtcacc tttattctgg cagaggaggg 120
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